217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL - NSPS SOURCE

PERMITTEE

DTE Energy Services
Attn: Joseph F. Clair
3430 South Federal Street
Chicago, Illinois 60616

Application No.: 00010044 I.D. No.: 031600AVA
Applicant's Designation: Date Received: January 8, 2008
Subject: Gas Turbines and Steam Boilers
Date Issued: Expiration Date:
Location: IIT Co-Generation Plant, 3430 South Federal St., Chicago, Cook County, 60616

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of two (2) 42 mmBtu/hour natural gas/#2 fuel oil-fired stationary turbines (Turbine #1 and Turbine #2) with water injection control, two (2) 82 mmBtu/hour natural gas-fired duct burners (Duct Burner #1 and Duct Burner #2), one (1) 31 mmBtu/hour natural gas-fired boiler (Boiler #4), and two (2) 25.2 mmBtu/hour natural gas/#2 fuel oil-fired boilers (Boiler #5 and Boiler #6) pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1a. This federally enforceable state operating permit is issued:

i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Carbon Monoxide (CO), Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO_2), and 100,000 tons of Carbon Dioxide equivalent (CO_2e) per year for Green House Gases (GHG)). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.

ii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for NO_x to less than 100 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 217 Subpart F (Process Heaters) and 35 Ill. Adm. Code Part 217 Subpart Q (Stationary Reciprocating Internal Combustion Engines And Turbines).

b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.

c. This permit supersedes all operating permit(s) for this location.

2a. Boiler #4, Boiler #5, Boiler #6, Duct Burner #1, and Duct Burner #2 are subject to the New Source Performance Standards (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR

60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.40c(a), except as provided in 40 CFR 60.40c(d), (e), (f), and (g), the affected facility to which 40 CFR 60 Subpart Dc applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (mmBtu/hr)) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr).

b. Pursuant to 40 CFR 60.42c(d), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/mmBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

c. Pursuant to 40 CFR 60.42c(h)(1), for distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 mmBtu/hr), compliance with the emission limits or fuel oil sulfur limits under 40 CFR 60.42c may be determined based on a certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.

d. Pursuant to 40 CFR 60.42c(i), the SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under 40 CFR 60.42c apply at all times, including periods of startup, shutdown, and malfunction.

e. Pursuant to 40 CFR 60.43c(d), the PM and opacity standards under 40 CFR 60.43c apply at all times, except during periods of startup, shutdown, or malfunction.

3a. Turbine #1 and Turbine #2 are subject to the New Source Performance Standards (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subparts A and GG. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.330(a), the provisions of 40 CFR 60 Subpart GG are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired.

b. Pursuant to 40 CFR 60.330(b), any facility under 40 CFR 60.330(a) which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of 40 CFR Part 60 except as provided in 40 CFR 60.332(e) and (j).

c. Pursuant to 40 CFR 60.332(a), on and after the date on which the performance test required by 40 CFR 60.8 is completed, every owner or operator subject to the provisions of 40 CFR 60 Subpart GG as specified in 40 CFR 60.332(b), (c), and (d) shall comply with one of the following, except as provided in 40 CFR

60.332(e), (f), (g), (h), (i), (j), (k), and (l).

i. No owner or operator subject to the provisions of 40 CFR 60 Subpart GG shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150\frac{(14.4)}{Y} + F$$

where:
STD = allowable ISO corrected (if required as given in 40 CFR 60.335(b)(1)) NO_x emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_x emission allowance for fuel-bound nitrogen as defined in 40 CFR 60.332(a)(4).

ii. The use of F in 40 CFR 60.332(a)(1) and (2) is optional. That is, the owner or operator may choose to apply a NO_x allowance for fuel-bound nitrogen and determine the appropriate F-value in accordance with 40 CFR 60.332(a)(4) or may accept an F-value of zero.

iii. If the owner or operator elects to apply a NO_x emission allowance for fuel-bound nitrogen, F shall be defined according to the nitrogen content of the fuel during the most recent performance test required under 40 CFR 60.8 as follows:

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
$N \leq 0.015$	0
$0.015 < N \leq 0.1$	0.04(N)
$0.1 < N \leq 0.25$	0.004 + 0.0067(N-0.1)
$N > 0.25$	0.005

Where:
N = the nitrogen content of the fuel (percent by weight).

or:

Manufacturers may develop and submit to USEPA custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Illinois EPA or USEPA before the initial performance test required by 40 CFR 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in theFederal Register.

d. Pursuant to 40 CFR 60.332(c), stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of 40 CFR 60.332(a)(2).

e. Pursuant to 40 CFR 60.332(d), stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in 40 CFR 60.332(b) shall comply with 40 CFR 60.332(a)(2).

f. Pursuant to 40 CFR 60.332(f), stationary gas turbines using water or steam injection for control of NO_x emissions are exempt from 40 CFR 60.332(a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

g. Pursuant to 40 CFR 60.332(k), stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from 40 CFR 60.332(a)(2) when being fired with an emergency fuel.

h. Pursuant to 40 CFR 60.333, on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, every owner or operator subject to the provision of 40 CFR 60 Subpart GG shall comply with one or the other of the following conditions:

   i. No owner or operator subject to the provisions of 40 CFR 60 Subpart GG shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

   ii. No owner or operator subject to the provisions of 40 CFR 60 Subpart GG shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

4a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.

c. Pursuant to 35 Ill. Adm. Code 212.206, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hour of actual heat input from

any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).

5a. Pursuant to 35 Ill. Adm. Code 214,122(b)(2), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).

b Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.

c. Pursuant to 35 Ill. Adm. Code 214.304, the emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with applicable 35 Ill. Adm. Code Part 214 Subparts B through F (i.e., 35 Ill. Adm. Code 214.122(b)).

6a. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmbtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

7a. This permit is issued based on Boiler #4, Boiler #5, Boiler #6, Duct Burner #1, and Duct Burner #2 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD because this source is not or is part of, a major source of HAP as defined in 40 CFR 63.2.

b. This permit is issued based on Boiler #4, Boiler #5, Boiler #6, Duct Burner #1, and Duct Burner #2 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11195(e), a gas-fired boiler as defined in 40 CFR 63 Subpart JJJJJJ are not subject to 40 CFR 63 Subpart JJJJJJ and to any requirements in 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11237, gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

8. Pursuant to 35 Ill. Adm. Code 218.303, the provisions of 35 Ill. Adm. Code 218.301 and 218.302 (Use of Organic Material) shall not apply to fuel combustion emission units.

9. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of

whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

10a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

b. Duct Burner #1, Duct Burner #2, and Boiler #4 shall only be operated with natural gas as the fuel. The use of any other fuel in Duct Burner #1, Duct Burner #2, and Boiler #4 requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.

c. Turbine #1, Turbine #2, Boiler #5, and Boiler #6 shall only be operated with natural gas or No. 2 distillate fuel oil as the fuel. The use of any other fuel in Turbine #1, Turbine #2, Boiler #5, and Boiler #6 requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.

d. The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) at this source with a sulfur content greater than the larger of the following two values:

i. 0.28 weight percent, or

ii. The wt. percent given by the formula: Maximum wt. percent sulfur = (0.00015) x (Gross heating value of oil, Btu/lb).

e. Organic liquid by-products or waste materials shall not be used in these fuel combustion emission units.

f. The Illinois EPA shall be allowed to sample all fuels stored at the above location.

11a. Emissions and operation of Turbine #1 shall not exceed the following limits:

i. Natural Gas Usage: 1.0 mmscf/month, 10.0 mmscf/year.

ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor (lbs/mmscf)	Emissions (lbs/Mo)	Emissions (Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	111,109.0	111,109.00	555.55
Carbon Monoxide (CO)	20.0	20.00	0.10
Nitrogen Oxides (NO_x)	170.0	170.00	0.85
Particulate Matter (PM)	6.6	6.60	0.03
Sulfur Dioxide (SO_2)	3.4	3.40	0.02
Volatile Organic Material (VOM)	2.1	2.10	0.01

iii. Distillate Fuel Oil Usage: 24,996 gallons/month, 249,962 gallons/year.

iv. Emissions from the combustion of distillate fuel oil:

Pollutant	Emission Factor (lbs/10^3 Gal)	Emissions (Tons/Mo)	Emissions (Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	33,583.20	419.73	4,197.26
Carbon Monoxide (CO)	48.57	0.61	6.07
Nitrogen Oxides (NO_x)	23.83	0.30	2.98
Particulate Matter (PM)	1.68	0.02	0.21
Sulfur Dioxide (SO_2)	39.59	0.49	4.95
Volatile Organic Material (VOM)	0.56	0.01	0.07

v. These limits are based on the maximum fuel usage emission factors for CO and NO_x derived by stack testing of Turbine #1 and standard emission factors for PM, SO_2 and VOM (Table 3.1-2a, AP 42, Fifth Edition, Volume I, Supplement F, April 2000).

b. Emissions and operation of Turbine #2 shall not exceed the following limits:

i. Natural Gas Usage: 1.0 mmscf/month, 10.0 mmscf/year.

ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor (lbs/mmscf)	Emissions (lbs/Mo)	Emissions (Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	111,109.0	111,109.00	555.55
Carbon Monoxide (CO)	33.5	33.50	0.17
Nitrogen Oxides (NO_x)	160.5	160.50	0.80
Particulate Matter (PM)	6.6	6.60	0.03
Sulfur Dioxide (SO_2)	3.4	3.40	0.02
Volatile Organic Material (VOM)	2.1	2.10	0.01

iii. Distillate Fuel Oil Usage: 24,996 gallons/month, 249,962 gallons/year.

iv. Emissions from the combustion of distillate fuel oil:

Pollutant	Emission Factor (lbs/10^3 Gal)	Emissions (Tons/Mo)	Emissions (Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	33,583.20	419.73	4,197.26
Carbon Monoxide (CO)	52.28	0.65	6.53
Nitrogen Oxides (NO_x)	26.34	0.33	3.29
Particulate Matter (PM)	1.68	0.02	0.21
Sulfur Dioxide (SO_2)	39.59	0.49	4.95
Volatile Organic Material (VOM)	0.56	0.01	0.07

v. These limits are based on the maximum fuel usage emission factors for CO and NO_x derived by stack testing of Turbine #2 and standard emission factors for PM, SO_2 and VOM (Table 3.1-2a, AP 42, Fifth Edition, Volume I, Supplement F, April 2000).

c. Emissions and operation of Duct Burner #1, Duct Burner #2, Boiler #4, Boiler #5, and Boiler #6 shall not exceed the following limits:

i. Natural Gas Usage: 71.6 mmscf/month, 716 mmscf/year.

ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor (lbs/mmscf)	Emissions (lbs/Mo)	(Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	120,713.1	4,321.53	42,215.29
Carbon Monoxide (CO)	84.0	3.01	30.07
Nitrogen Oxides (NO_x)	100.0	3.58	35.80
Particulate Matter (PM)	7.6	0.27	2.72
Sulfur Dioxide (SO_2)	0.6	0.02	0.21
Volatile Organic Material (VOM)	5.5	0.20	1.97

These limits are based on the maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

ii. Boiler #5 and Boiler #6 Fuel Oil Usage: 6,226 gallons/month, 62,259 gallons/year.

Pollutant	Emission Factor (lbs/10^3 Gal)	Emissions (lbs/Mo)	(Tons/Yr)
Carbon Dioxide Equivalent (CO_2e)	22,382.88	139,354	696.77
Carbon Monoxide (CO)	5.00	31.13	0.16
Nitrogen Oxides (NO_x)	20.00	124.52	0.62
Particulate Matter (PM)	3.30	20.55	0.10
Sulfur Dioxide (SO_2)	39.76	247.54	1.24
Volatile Organic Material (VOM)	0.20	1.25	0.01

These limits are based on the maximum boilers operations and standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E , September 1999, corrected May 2010).

d. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

12. This permit is issued based on the Potential to Emit (PTE) for Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the source being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program (CAAPP) Permit.

13a. Pursuant to 40 CFR 60.8(a), at such other times as may be required by the Illinois EPA or USEPA under section 114 of the Clean Air Act, the owner or operator of such facility shall conduct performance (s) and furnish the

Illinois EPA or USEPA a written report of the results of such performance test(s).

b. Pursuant to 40 CFR 60.8(b), performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart of 40 CFR Part 60 unless the Illinois EPA or USEPA:

   i. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;

   ii. Approves the use of an equivalent method;

   iii. Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;

   iv. Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected facility is in compliance with the standard; or

   v. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under section 114 of the Clean Air Act.

c. Pursuant to 40 CFR 60.8(c), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

d. Pursuant to 40 CFR 60.8(d), the owner or operator of an affected facility shall provide the Illinois EPA or USEPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Illinois EPA or USEPA the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Illinois EPA or USEPA as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Illinois EPA or USEPA by mutual agreement.

e. Pursuant to 40 CFR 60.8(e), the owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

i. Sampling ports adequate for test methods applicable to such facility. This includes:

A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test 1 methods and procedures; and

B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

ii. Safe sampling platform(s).

iii. Safe access to sampling platform(s).

iv. Utilities for sampling and testing equipment.

f. Pursuant to 40 CFR 60.8(f), unless otherwise specified in the applicable subpart of 40 CFR Part 60, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard under 40 CFR Part 60. For the purpose of determining compliance with an applicable standard under 40 CFR Part 60, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Illinois EPA's or USEPA's approval, be determined using the arithmetic mean of the results of the two other runs.

14a. Pursuant to 40 CFR 60.44c(a), except as provided in 40 CFR 60.44c(g) and (h) and 40 CFR 60.8(b), performance tests required under 40 CFR 60.8 shall be conducted following the procedures specified in 40 CFR 60.44c(b), (c), (d), (e), and (f), as applicable. 40 CFR 60.8(f) does not apply to 40 CFR 60.44c. The 30-day notice required in 40 CFR 60.8(d) applies only to the initial performance test unless otherwise specified by the Illinois EPA or USEPA.

b Pursuant to 40 CFR 60.44c(g), for oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under 40 CFR 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under 40 CFR 60.46c(d)(2).

c. Pursuant to 40 CFR 60.44c(h), for affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the

performance test shall consist of the certification, the certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.

15a. Pursuant to 40 CFR 60.335(a), the owner or operator shall conduct the performance tests required in 40 CFR 60.8, using either

i. EPA Method 20,

ii. ASTM D6522-00, or

iii. EPA Method 7E and either EPA Method 3 or 3A in appendix A to 40 CFR Part 60, to determine NO_x and diluent concentration.

iv. Sampling traverse points are to be selected following Method 20 or Method 1, (non-particulate procedures) and sampled for equal time intervals. The sampling shall be performed with a traversing single-hole probe or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

v. Notwithstanding 40 CFR 60.335(a)(4), the owner or operator may test at few points than are specified in Method 1 or Method 20 if the following conditions are met:

A. You may perform a stratification test for NO_x and diluent pursuant to the procedures specified in section 6.5.6.1(a) through (e) appendix A to 40 CFR Part 75.

B. Once the stratification sampling is completed, the owner or operator may use the following alternative sample point selection criteria for the performance test:

I. If each of the individual traverse point NO_x concentrations, normalized to 15 percent O_2, is within ±10 percent of the mean normalized concentration for all traverse points, then you may use 3 points (located either 16.7, 50.0, and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The 3 points shall be located along the measurement line that exhibited the highest average normalized NO_x concentration during the stratification test; or

II. If each of the individual traverse point NO_x concentrations, normalized to 15 percent O_2, is within ±5 percent of the mean normalized concentration for all traverse points, then you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid.

vi. Other acceptable alternative reference methods and procedures are given in 40 CFR 60.335(c).

b. Pursuant to 40 CFR 60.335(b), the owner or operator shall determine compliance with the applicable nitrogen oxides emission limitation in 40 CFR 60.332 and shall meet the performance test requirements of 40 CFR 60.8 as follows:

i. For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{xo}) corrected to 15 percent O_2 shall be corrected to ISO standard conditions using the following equation. Notwithstanding this requirement, use of the ISO correction equation is optional for: Lean premix stationary combustion turbines; units used in association with heat recovery steam generators (HRSG) equipped with duct burners; and units equipped with add-on emission control devices:

$$NO_x = (NO_{xo})(P_r/P_o)^{0.5}\ e^{19\ (Ho\ -\ 0.00633)}\ (288^{\circ}K/T_a)^{1.53}$$

Where:

NO_x = emission concentration of NO_x at 15 percent O_2 and ISO standard ambient conditions, ppm by volume, dry basis,

NO_{xo} = mean observed NO_x concentration, ppm by volume, dry basis, at 15 percent O_2,

P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg,

P_o = observed combustor inlet absolute pressure at test, mm Hg,

H_o = observed humidity of ambient air, g H_2O/g air,

e = transcendental constant, 2.718, and

T_a= ambient temperature, $^{\circ}K$.

ii. The 3-run performance test required by 40 CFR 60.8 must be performed within ±5 percent at 30, 50, 75, and 90-to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. If the turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. Notwithstanding these requirements, performance testing is not required for any emergency fuel (as defined in 40 CFR 60.331).

iii. For a combined cycle turbine system with supplemental heat (duct burner), the owner or operator may elect to measure the turbine NO_x emissions after the duct burner rather than directly after the turbine. If the owner or operator elects to use this alternative sampling location, the applicable NO_x emission limit in 40 CFR 60.332 for the combustion turbine must still be met.

iv. If water or steam injection is used to control NO_x with no additional post-combustion NO_x control and the owner or operator chooses to monitor

the steam or water to fuel ratio in accordance with 40 CFR 60.334(a), then that monitoring system must be operated concurrently with each EPA Method 20, ASTM D6522-00, or EPA Method 7E run and shall be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable 40 CFR 60.332 NO_x emission limit.

v. If the owner operator elects to claim an emission allowance for fuel bound nitrogen as described in 40 CFR 60.332, then concurrently with each reference method run, a representative sample of the fuel used shall be collected and analyzed, following the applicable procedures described in 40 CFR 60.335(b)(9). These data shall be used to determine the maximum fuel nitrogen content for which the established water (or steam) to fuel ratio will be valid.

vi. If the owner or operator elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately (as described in 40 CFR 60.335(b)(7)) or as part of the initial performance test of the affected unit.

vii. If the owner or operator elects to install and certify a NO_x CEMS under 40 CFR 60.334(e), then the initial performance test required under 40 CFR 60.8 may be done in the following alternative manner:

A. Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.

B. Use the test data both to demonstrate compliance with the applicable NO_x emission limit under 40 CFR 60.332 and to provide the required reference method data for the RATA of the CEMS described under 40 CFR 60.334(b).

C. The requirement to test at three additional load levels is waived.

viii. If the owner or operator elects under 40 CFR 60.334(f) to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls, the appropriate parameters shall be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in 40 CFR 60.334(g).

ix. To determine the fuel bound nitrogen content of fuel being fired (if an emission allowance is claimed for fuel bound nitrogen), the owner or operator may use equipment and procedures meeting the requirements of, for gaseous fuels, shall use analytical methods and procedures that are accurate to within 5 percent of the instrument range and are approved by the Illinois EPA or USEPA.

x. If the owner or operator is required under 40 CFR 60.334(i)(1) or (3) to periodically determine the sulfur content of the fuel combusted in

the turbine, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using for gaseous fuels, ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Illinois EPA or USEPA.

xi. The fuel analyses required under 40 CFR 60.335(b)(9) and (b)(10) may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

16a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.

b. Testing required by Condition 17 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.

17. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.

18a. Pursuant to 40 CFR 60.46c(d)(2), as an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

b. Pursuant to 40 CFR 60.46c(e), the monitoring requirements of 40 CFR 60.46c(a) and (d) shall not apply to affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under 40 CFR 60.48c(f), as applicable.

19a. Pursuant to 40 CFR 60.334(a), except as provided in 40 CFR 60.334(b), the owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60 Subpart GG and using water or steam injection to control NO_x emissions shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine.

b. Pursuant to 40 CFR 60.334(g), the steam or water to fuel ratio or other parameters that are continuously monitored as described in 40 CFR 60.334(a), (d) or (f) shall be monitored during the performance test required under 40 CFR 60.8, to establish acceptable values and ranges. The owner or operator may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The owner or operator shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_x emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to 40 CFR Part 75 and that use the low mass emissions methodology in 40 CFR 75.19 or the NO_x emission measurement methodology in appendix E to 40 CFR Part 75, the owner or operator may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 40 CFR 75.19 (e)(5) or in section 2.3 of appendix E and section 1.3.6 of appendix B to 40 CFR Part 75.

c. Pursuant to 40 CFR 60.334(h), the owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60 Subpart GG:

i. Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR 60.334(h)(3). The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86, which measure the major sulfur compounds may be used; and

ii. Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in 40 CFR 60.332). The nitrogen content of the fuel shall be determined using methods described in 40 CFR 60.335(b)(9) or an approved alternative.

iii. Notwithstanding the provisions of 40 CFR 60.334(h)(1), the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR 60.331(u), regardless of whether an existing custom schedule approved by the Illinois EPA or USEPA for 40 CFR 60 Subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

A. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

B. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR Part 75 is required.

d. Pursuant to 40 CFR 60.334(i), the frequency of determining the sulfur and nitrogen content of the fuel shall be as follows:

i. Gaseous fuel. Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For owners and operators that elect not to demonstrate sulfur content using options in 40 CFR 60.334(h)(3), and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

ii. Custom schedules. Notwithstanding the requirements of 40 CFR 60.334(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR 60.334(i)(3)(i) and (i)(3)(ii), custom schedules shall be substantiated

with data and shall be approved by the Illinois EPA or USEPA before they can be used to comply with the standard in 40 CFR 60.333.

20a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

21a. Pursuant to 40 CFR 60.48c(e)(11), the owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall keep records and submit reports as required under 40 CFR 60.48c(d), including the following information, as applicable. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under 40 CFR 60.48c(f)(1), (2), (3), or (4), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

b. Pursuant to 40 CFR 60.48c(f)(1), fuel supplier certification shall include the following information for distillate oil:

i. The name of the oil supplier;

ii. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and

iii. The sulfur content of the oil.

c. i. Pursuant to 40 CFR 60.48c(g)(1), except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

ii. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding

opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

iii. Pursuant to 40 CFR 60.48c(g)(3), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to 40 CFR 60 Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

d. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48c shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

22. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

23. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.

24a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

i. Fuel oil usage for the Turbines #1 and #2, and Boilers #5 and #6 (gallons/month and gallons/year);

ii. Certification from the fuel supplier of weight percent sulfur content of the distillate fuel oil used in Turbines #1 and #2, and Boilers #5 and #6 with each fuel oil shipment received (weight %);

iii. Natural gas usage for the boiler, duct burners, and turbines (mmscf/month and mmscf/year); and

iii. Monthly and annual emissions of CO2e, CO, NO_x, PM, SO_2, and VOM from the source with supporting calculations (tons/week and tons/year).

b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

25. Pursuant to 40 CFR 60.7(a)(4), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows: A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.

26a. Pursuant to 40 CFR 60.48c(b), the owner or operator of each affected facility subject to the SO_2 emission limits of 40 CFR 60.42c, or the PM or opacity limits of 40 CFR 60.43c, shall submit to the Illinois EPA or USEPA the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of 40 CFR Part 60.

b. Pursuant to 40 CFR 60.48c(d), the owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall submit reports to the Illinois EPA or USEPA.

c. Pursuant to 40 CFR 60.48c(j), the reporting period for the reports required under this 40 CFR 60 Subpart Dc is each six-month period. All reports shall be submitted to the Illinois EPA or USEPA and shall be postmarked by the 30th day following the end of the reporting period.

27. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.

28a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within thirty (30) days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

Telephone: 847/294-4000 Fax: 847/294-4018

If you have any questions on this, please call German Barria at 217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REP:GB:

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A – Emission Summary

This attachment provides a summary of the maximum emissions from cogeneration plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels (e.g., 100 tons/year for CO, NO_x, and SO_2, and 100,000 tons CO2e/year for GHG) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

	E M I S S I O N S (Tons/Year)					
Emission Unit	CO_2e	CO	NO_x	PM	SO_2	VOM
Turbine #1 (Natiral Gas)	555.55	0.10	0.85	0.03	0.02	0.01
Turbine #1 (#2 Fuel Oil)	4,197.26	6.07	2.98	0.21	4.95	0.07
Turbine #2 (Natural Gas)	555.55	0.17	0.80	0.03	0.02	0.01
Turbines #2 (#2 Fuel Oil)	4,197.26	6.53	3.29	0.21	4.95	0.07
Duct Burner #1 & 2, Boilers #4, 5, & 6 (Natural Gas)	42,215.29	30.07	35.80	2.72	0.21	1.97
Boilers #5 & #6 (#2 Fuel Oil)	696.77	0.16	0.62	0.10	1.24	0.01
Totals:	52,417.68	43.10	44.34	3.30	11.39	2.14

GB: